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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,522	01/23/2004	Arthur C. Day	38190/271477	9220
826	7590	07/12/2005		
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			EXAMINER DONOVAN, LINCOLN D	
			ART UNIT 2832	PAPER NUMBER

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/763,522	<b>Applicant(s)</b> DAY ET AL.	
	<b>Examiner</b> Lincoln Donovan	<b>Art Unit</b> 2832	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 10-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-9 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>01-23-04</u> | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

Claims 10-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claimed method, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 04-29-05 ***Claim***

***Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheppard [US 3,789,337] in view of Terlop et al. [US 5,367,760].

Regarding claims 1-2, 4-6, Sheppard discloses an electromagnet [figure 5] comprising:

- a core [84];
- at least one winding [86, 89] disposed circumferentially about the core such that the at least one winding extends at least one revolution therearound; and
- at least one spacer [88] disposed about the core and adjacent to the at least one winding defining a channel.

Sheppard disclose everything claimed except the spacer being disposed circumferentially about the core and forming a channel therein.

Terlop et al. discloses an electromagnet [figure 25] including a spacer assembly formed of parallel strips forming channels mounted circumferentially and longitudinally about the windings [figures 18 and 26].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the spacer design of Terlop et al. for the spacers of Sheppard in order to ensure proper winding and spacer alignment.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheppard, as modified, as applied to claim 1 above, and further in view of Griebel [US 5,430,426].

Sheppard, as modified, disclose everything claimed except the use of end plates forming a housing for the winding having an inlet and outlet for the channels and a serpentine coolant flow path therethrough.

Griebel discloses an electromagnet assembly [10] having first and second end plates [40, 42] providing a serpentine coolant flow path via a inlets and outlets mounted on the end plates forming a housing [figures 2-5].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the housing design of Griebel with Sheppard, as modified, in order to increase cooling efficiency.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fischer [US 3,368,174], Baker et al. [US 3,056,071], Burgher et

Art Unit: 2832

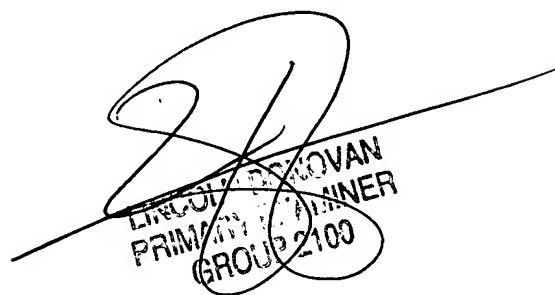
al. [US 4,584,551], Hopkinson [US 6,157,282], Schneider-Muntau et al. [US 4,270,112] and Grimes et al. [US 5,651,175].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lincoln Donovan whose telephone number is 571-272-1988. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Enad Elvin can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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LINCOLN DONOVAN  
PRIMARY EXAMINER  
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